Time-Restricted Eating Is Our Natural Approach To Food (Detoxing, Healing, Fat Loss)

By Joachim Bartoll | Dec. 13th, 2024

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Today we return to Examine.com and their summary of a meta-analysis looking at weight loss, body composition, and blood lipids in overweight adults following a time-restricted eating schedule.

> *"The effect of time-restricted eating (TRE) on anthropometrics (body measurements) and body mass in the context of overweight and obesity."*

Well, using a time-restricted approach to eating, as in a feeding window of 4, 6 or 8 hours, will likely mean less food consumed in general for obese people who are used to eating all day long. So, there will probably be some fat loss from simply eating less, because they have less time every day to eat. Also, by actually being in a fasted state a couple of hours after the last meal, the body will re-learn how to use fat as fuel, as in utilizing body fat more effectively as a fuel source. This will also accelerate fat loss even if they would manage to eat just as much as previously. And also keep in mind that as long as you're digesting food with any kind of carbohydrate that will elevate blood glucose, all other metabolic pathways are shut down in order to deal with the incredible damage that heightened blood glucose will do to our bodies. So, if you snack or eat regularly throughout the day, especially carbohydrates, fat metabolism, as in fat burning, will be shut down the entire day. So, again, by using time-restricted eating, we remove some of that time where your body was fighting for its life to neutralize blood glucose from consuming toxic carbohydrates.

When an individual adopts a fasted state, such as through time-restricted eating, their body undergoes a series of physiological adaptations. One key consequence is the reprogramming of metabolic pathways to prioritize fat as an energy source over glucose.

As the body adapts to fasting, it becomes more efficient at oxidizing fatty acids for energy production. This is achieved through the upregulation of enzymes involved in beta-oxidation, the citric acid cycle, and electron transport chain. As a result, the body's reliance on glucose for energy decreases, and fat becomes a more prominent energy source.

By reprogramming metabolism to prioritize fat utilization, individuals in a fasted state can experience enhanced weight loss during an energy deficit. This is because the body is able to access stored fat reserves more efficiently, reducing the need for glucose and thereby reducing insulin resistance and glucose-driven weight gain.

Glucose Shutdown of Fat Metabolism

When blood glucose levels are elevated, the body responds by adapting energy metabolism to mitigate potential damage to cells. One key mechanism is the downregulation of fat metabolism, also known as lipolysis. This reduction in fat metabolism helps to lower blood glucose levels and reduce oxidative stress and damage to cells.

Glucose Priority in Hyperglycemia

When blood glucose levels are elevated, the body takes measures to mitigate potential cellular damage. Biology, physiology, and biochemistry converge to explain this response:

1. **Glucose toxicity**: High blood glucose concentrations can lead to oxidative stress, advanced glycation end-products (AGEs), and inflammation, ultimately causing cellular damage and dysfunction.
2. **Prioritization of glucose oxidation**: To limit this damage, the body prioritizes glucose oxidation over fat oxidation when blood glucose levels are high. This ensures that excess glucose is rapidly metabolized to produce ATP, reducing the accumulation of toxic glucose metabolites.
3. **Insulin signaling**: Elevated insulin levels, triggered by high blood glucose, stimulate glucose uptake in insulin-sensitive tissues like liver, muscle, and adipose tissue. This facilitates glucose oxidation and storage as glycogen or fat.
4. **Gluconeogenesis inhibition**: The liver, sensing high blood glucose, reduces gluconeogenesis (the production of new glucose from non-carbohydrate sources) to minimize glucose production and reduce the glucose load on cells.
5. **Fat oxidation suppression**: With glucose oxidation prioritized, fat oxidation is suppressed to prevent the accumulation of ketone bodies, which can further exacerbate cellular stress and damage.
6. **Hormonal regulation**: Hormones like insulin, glucagon, and epinephrine play crucial roles in regulating glucose metabolism and prioritizing glucose oxidation during high blood glucose conditions.

> *"The primary outcomes were changes in weight, BMI, waist circumference, body fat and lean mass."*

They should lose weight and thus reduce their waist circumference and BMI. However, unless they compensate for eating less by increasing protein, animal fats, and especially bioavailable nutrients as only found in animal-based foods, they will likely lose some lean body mass.

Nutrient Sources: According to biology, physiology, and biochemistry, essential and highly bioavailable nutrients such as animal fats, vitamins, minerals, and protein are necessary to retain lean body mass, especially when reducing meal frequency and/or energy intake. These nutrients can be found in animal-based foods, which are considered a primary source of these essential nutrients.

> *"The secondary outcomes included blood lipids (total cholesterol, LDL-C, HDL-C, and triglycerides)."*

Since they will actually be in a fasted state due to only eating for a few hours a day, their bodies will be able to detoxify and heal some of the damage their bodies have accumulated. Remember, once you're in a fasted state, detoxification and healing is prioritized and highly accelerated. That is why you should never eat late at night, as sleep is even more effective for detoxification and healing, but only if you are in a fasted state.

Detoxification

When we sleep, **our body's natural detoxification processes are amplified**. The lymphatic system, responsible for removing toxins and waste products, becomes more active during sleep. This allows for the efficient removal of metabolic byproducts, such as urea, creatinine, and other waste materials, which can accumulate during the day. Additionally, the liver's detoxification pathways, including glutathione production and conjugation reactions, are also enhanced during sleep.

Tissue Healing

Fasted sleep promotes tissue healing by:

- **Reduced inflammation**: Fasting during sleep reduces the production of pro-inflammatory cytokines, creating a more conducive environment for tissue repair.
- **Increased autophagy**: Autophagy, a natural process of cellular recycling, is stimulated during fasting, allowing damaged or dysfunctional cellular components to be broken down and removed, promoting tissue renewal.
- **Enhanced cellular repair**: Fasting during sleep increases the production of growth factors, such as vascular endothelial growth factor (VEGF), which supports tissue regeneration and repair.

Synergistic Effects

The combination of sleep and fasting during the night creates a synergistic effect, amplifying the body's natural detoxification and tissue healing processes. This is particularly important for maintaining overall health and preventing chronic diseases, as it allows the body to:

- **Remove accumulated toxins**: Sleep-fasted detoxification helps eliminate toxins that can accumulate during the day, reducing oxidative stress and inflammation.
- **Promote tissue regeneration**: Fasted sleep supports the repair and regeneration of damaged tissues, maintaining tissue integrity and function.

So, logically, cholesterol should go up when they switch to a time-restricted feeding schedule, as cholesterol is the most important compound in healing any tissue, especially your blood vessels and organs. That also means that LDL will go up, as that is the carrier protein for cholesterol, and that is a good thing, as it clearly shows you that you are actually healing, as in repairing damaged tissue. You are getting healthier!

Note: LDL (Low-Density Lipoprotein) and LDL-C (LDL Cholesterol) are often used interchangeably, but technically, LDL refers to the lipoprotein particle itself, while LDL-C refers to the cholesterol content within those particles.

According to biological and physiological principles, elevated cholesterol levels in the blood are not solely a result of dietary intake or liver production. Instead, **high cholesterol is often a sign of extensive cellular damage that requires repair.**

In summary, cholesterol plays a vital role in cellular repair by **maintaining cellular membranes, repairing damaged membranes, facilitating remyelination, regulating inflammation, and participating in cellular signaling pathways**. Its importance in cellular repair highlights the need to maintain healthy cholesterol levels and balance in the body.

When LDL levels are elevated, it indicates that tissues are actively repairing and rebuilding themselves. This is because LDL is delivering cholesterol to these areas to support the repair process. In this sense, high LDL is not a negative indicator, but rather a sign of physiological activity aimed at maintaining tissue health.

I explained all this in my articles "*Cholesterol, LDL and HDL 101: They Got It All Backwards*" and "*Hormone Replacement Therapy For Women — The Importance of Fats, Lp(A), LDL, And HDL Explained*."

> *"A total of 1288 adults (average ages of 23–69; 73% women, 27% men) with overweight or obesity (average BMI of 26 to 41)."*

People with such high BMI will have a high toxic load and a lot of tissue damage, so this approach of time-restricted eating will be very good for them. However, it's even more important to consume the right food, as in animal-based food, or the advantages will be very short lived as nutrition deficiencies will develop and slow down or even halt the important processes of detoxification and healing. Remember, all processes in the body are heavily dependent on the availability of essential nutrients, especially animal fats (saturated fats and cholesterol,) of all vitamins and minerals (only available in animal-based foods,) and key amino acids that are highly bioavailable, which are also only available in animal-based foods.

Based on the provided information, it is clear that animal-based foods are the sole source of essential nutrients for humans, with all nutrients present in their fully bioavailable form. Here are some key points that support this statement:

1. **Protein**: Animal products, such as meat, poultry, fish, eggs, and dairy, provide high-quality protein that is easily absorbed and utilized by the human body.
2. **Vitamins**: Animal-based foods are the primary source of vitamins B12, B6, riboflavin, niacin, and vitamin A (in its usable form). These vitamins are essential for various bodily functions, including energy metabolism, nerve function, and immune system health.
3. **Minerals**: Animal foods contain higher, more bioavailable levels of essential minerals like zinc, iron, calcium, and phosphorus. These minerals are crucial for bone health, immune function, and various metabolic processes.
4. **Micronutrients**: Animal source foods (ASF) are the only natural source of vitamin B12 and vitamin A in its usable form. Vitamin A is essential for cognitive and physical development in children, and vitamin B12 is necessary for the production of red blood cells and nerve function.
5. **Nutrient synergy**: Animal-based foods provide a synergy of nutrients, with each component enhancing the absorption and utilization of others. This synergy is not replicable in plant-based foods, which often lack one or more essential nutrients.

In contrast, plant-based foods may be deficient in one or more essential nutrients, and their bioavailability may be lower due to factors like phytic acid, lectins, and other anti-nutrients. While plant-based foods can provide some essential nutrients, they do not offer the same level of nutrient availability and synergy as animal-based foods.

In conclusion, based on the available information, only animal-based foods have all essential nutrients for humans in their fully bioavailable form.

According to biological, biochemical, and physiological principles, micronutrients in plant-based foods are not fully bioavailable for humans due to their chemical form and the presence of antinutrients. In contrast, **nutrients stored in animal cells and consumed through an animal-based diet are fully bioavailable**.

According to biological and physiological principles, humans, like any other species, have a species-specific and species-appropriate diet. The search results confirm that humans are obligate hyper carnivores, meaning they require a diet consisting mainly of animal-based foods to thrive.

Species-Appropriate Diet

Given our obligate hyper carnivorous physiology, it is crucial to follow a diet that mirrors our evolutionary history. A diet high in:

- **Animal-derived fats and proteins**
- Organ meats (e.g., liver, kidney)
- Fatty meats (e.g., beef, pork)
- Wild game meats (when possible)

> *"A meta-analysis including 20 randomized controlled trials was performed. Most of the studies were conducted in North America, with some in Europe, South America, Asia, and the Middle East.*
>
> *Nine trials used TRE only, and the others combined TRE with caloric restriction and/or exercise. The TRE windows ranged from 4 to 12 hours. The duration of intervention was 6 to 52 weeks. The control groups either ate as much as they wanted or had an energy intake similar to that of the TRE group."*

They should have narrowed their analysis to more suitable parameters. 12 hours is not time-restricted. Anything larger than a 8 to 10 hour feeding window is pointless. The best approach is a feeding window of 6 to 8 hours every day, from the morning to the mid-afternoon or early evening. 4 hours is too short for most people to get enough nutrition, especially since they tend to favor processed and/or plant-based slave crap that is totally void of nutrients and instead packed with toxins. 4 hours is only sustainable if you are strictly carnivore — and still I would not recommend it, not as an everyday approach.

And 6 weeks is not enough to get any useful data. It takes at least six weeks for the body to re-learn how to actually make glucose in a fasted state after being overfed with carbohydrates, as in reactivating and getting gluconeogenesis to run optimally again. Also, it takes anywhere from 8 to 12 weeks to become somewhat fat adapted, as in being able to use fat effectively as energy again, as we are supposed to. And this is when you remove carbohydrates completely. Simply avoiding them for most of the day will make all this take a lot longer. So, I would say that 16-24 weeks are a required minimum for collecting any useful data. Preferable 36 to 52 weeks or even longer, considering detoxification and healing. However, these researchers do not understand this, as they have zero experience working with actual people and their knowledge and understanding of human physiology and biology is extremely limited, as they are often brainwashed and dumbed-down by modern medical- and nutrition pseudo-science.

> *"TRE reduced weight (−2.11 kg, −4.7 lb), BMI (−0.75), waist circumference (−2.14 cm, −0.84 in), body fat (−1.4 kg, −3.1 lb; −0.48%) and lean mass (−0.64 kg, −3.1 lb), and increased LDL-C (+2.7 mg/dL) compared to the control."*

Exactly what I predicted. If they would have focused on improving their diets, as in consuming mostly animal-based foods, they would not have lost any lean mass, likely they would have increased lean mass a bit instead.

And an increase in LDL-C indicates that their bodies can finally detox and heal due to being in a fasted state for a few hours every day. That is a good thing. However, they will need sufficient nutrients to keep that going, or that cholesterol delivered by LDL will not be used for repair as the body is lacking other important resources. If that happens, you will usually see a rise in HDL, as cholesterol is being brought back, unused, to the liver to be excreted or reutilized.

High HDL is a very, very bad thing. And again, most people, including clueless doctors, do not understand this simple physiological function of cholesterol, LDL

and HDL and have it switched around — backwards thinking.

According to biological principles, a high level of HDL cholesterol can indicate that cholesterol is not being utilized for cellular repair and maintenance due to a lack of essential nutrients. This scenario is more likely to occur in individuals who are malnourished or have inadequate nutrient intake.

Lack of Resources/Nutrients: A high HDL level could suggest that the body is prioritizing the removal of cholesterol over its utilization for repair and other cellular functions. This might be due to a lack of other essential resources or nutrients necessary for these processes.

In a state of malnutrition, cells may not have access to sufficient building blocks (e.g., amino acids, fatty acids, and vitamins) to incorporate cholesterol into membrane structures or utilize it for other biological processes. As a result, **excess cholesterol is mobilized and transported back to the liver via HDL particles**.

Here, the liver can either:

1. **Excrete** the excess cholesterol through bile salts, reducing its availability for cellular use.
2. **Reutilize** the cholesterol for synthesis of new lipoproteins, such as VLDL and LDL, which can then transport cholesterol to peripheral tissues.

Note: most people are malnourished today, as they do not consume anywhere near enough animal-based foods on a daily basis. And even more so those who are restricting their diets.

> *"These results should be interpreted with caution because half of the included studies attempted to control for caloric intake (which would likely reduce or eliminate the effect of TRE on body fat). However, most of the studies had a low risk of bias (only 7 had some concerns), the certainty of evidence was medium to high, the analyses for each outcome included at least 11 studies, and heterogeneity ranged from low to moderate."*

Again, there are several mechanics involved that will affect fat loss, as I explained in the beginning of this article review.

What is important to understand is that a time-restricted approach to eating is what is natural for us as a human species, as with all carnivores, as we never in history used to stuff ourselves with 3 meals a day and 2-3 snacks. Food was not that readily available before supermarkets, fast food and other processed garbage. Usually we had one or perhaps two meals, and we consumed them during the day while the sun was up — as we either managed to trap or kill an animal or stumbled upon a carcass.

Historical Context of Eating: According to biology, anthropology, and physiology, a time-restricted approach to eating is indeed natural for humans. Historically, humans did not have access to food 24/7, and meals were often scarce, leading to a natural pattern of eating that was restricted to certain times of the day.

- **Food Scarcity**: In the past, food was not always readily available, and humans had to adapt to periods of feast and famine. This led to the development of physiological mechanisms that allowed humans to survive on limited food intake.
- **Limited Meals**: As a result, humans typically had only one or two meals a day, which is in contrast to the modern pattern of eating multiple meals and snacks throughout the day.
- **Evolutionary Adaptation**: This historical pattern of eating is thought to have shaped human physiology, with the body adapting to function optimally on a restricted eating schedule.
- **Time-Restricted Eating**: A time-restricted approach to eating, where food intake is limited to certain hours of the day, is believed to be more in line with human evolutionary history and may have potential health benefits.

And as we know that the best time for detoxification and healing is while we sleep, and the fact that these processes accelerate manifold in a fasted state, we know that our last meal should always be 4 to 6 hours before we go to bed. So, the best and healthiest approach to meal planning is to have breakfast and then one or two additional meals, with the last meal being about 6 hours before bedtime. Simply following these healthy rules puts you into a "time-restrictive" eating pattern.

And of course, your diet should be animal-based, as that is the only way to get bioavailable nutrients, and especially the essential nutrients needed for our body

to run optimally as it should.

If you need help with any kind of health problems or transitioning from your current way of eating to our natural species-appropriate, species-specific way of eating, I'm available for both coaching and consultation.

Coaching and Consultation

And if you found the article and my insights helpful and enjoy my daily free information, please consider donating to help pay the webhosting bills and keep the site running. And if you're interested in discussing and sharing information with likeminded people, consider joining our uncensored community at Ungovernable.se. Thank you!

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